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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,991	06/29/2001	In Jae Chung	41501-5431	5669

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EXAMINER

DI GRAZIO, JEANNE A

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/893,991

Applicant(s)

CHUNG ET AL.

Examiner

Jeanne A. Di Grazio

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 28 January 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action replaces the First Office Action mailed on 11/19/2002 and is in response to Amendment of January 28, 2003.

#### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on July 4, 2000. It is noted, however, that applicant has not filed a certified copy of the Korean Patent Application No. 2000-38015 as required by 35 U.S.C. 119(b).

The Examiner has carefully searched the application contents, and though Applicant states that an Application Transmittal and a post card receipt for the filing of the application indicates that a certified copy of the priority document was filed, there is NO certified copy in the file contents at present.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Kwak (US '878 B1).

Per claims 1-4: See Figure 10.

Claims 10 and 13-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (US '907 B1).

Per claim 10: See claim 1 of Park.

Per claims 13-20: Figure 3 and Column 3, Lines 62-67 and Col. 4, Lines 1-37.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noriyama (US '439) and Park et al. (US '347 B1) in view of Kwak (US '878 B1).

Per claim 5: Noriyama at Figure 5. Noriyama does not appear to have a storage capacitor connected to a pixel electrode and including an electrode overlapping with a projection of a scan line for an adjacent pixel area; however, see Park (Col. 4, Lines 19-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Noriyama in view of Park to eliminate flickering and improve image quality (Col. 5, Lines 62-67).

Noriyama does not appear to have a pixel electrode with a projection connected to a TFT; however, see Kwak (Figure 10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Noriyama in view of Kwak for switching.

Noriyama has a pixel electrode between scan line first and second projections (See Noriyama at Figure 5 and Col. 5, Lines 18-24). Noriyama does not appear to have a pixel

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electrode portion overlapping a scan line for an adjacent pixel area; however, see Kwak Figure 10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Noriyama in view of Kwak for a storage capacitor.

Per claims 6 and 7: See Noriyama Figure 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a pixel projection as a gate electrode for a TFT and pixel electrode shape avoiding first and second projections of adjacent scan lines for switching and to prevent short circuiting.

Per claim 9: Noriyama does not appear to have substantially bilaterally symmetric pixel electrodes; however, see Kwak Figure 10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Noriyama in view of Kwak to avoid defects arising from electrostatic charges [ABS].

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noriyama (US '439), Park et al. (US '347 B1) and Kwak (US '878 B1) in further view of Kawano (US '745).

Per claim 8: Noriyama does not appear to have a storage capacitor with a shape projecting towards a lower right part of a pixel electrode in an adjacent pixel area; however, see Kawano Figure 10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Noriyama in view of Kawano to prevent short circuiting.

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US 907 B1) in view of Kwak (US '878 B1).

Per claims 11 and 12: Park does not appear to have a pixel electrode symmetric about a virtual line extending substantially vertically and passing a center of the pixel area and lower right and left corners removed in substantially the same amount; however, see Kwak at Figure

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10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Park in view of Kwak to avoid defects arising from electrostatic charges [ABS].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeanne A. Di Grazio whose telephone number is (703)305-7009.

The examiner can normally be reached on M-F.

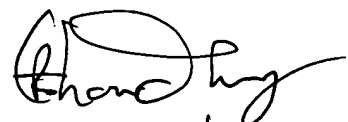
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim, can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-8741 for regular communications and (703)746-8741 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Jeanne Andrea Di Grazio

Robert Kim, SPE

JDG  
April 6, 2003

  
T. Chowdhury  
Primary Examiner.  
Tech. Center 2800